Listing of Claims:

- 1. (Currently Amended) A device for providing an angiographic image (A) of a body structure (1) matching a given heartbeat phase (H_d) and a respiratory phase (R_d) , comprising a database (2) with angiograms (3, 3a) of the body structure (1) from different heartbeat phases (H) and respiratory phases (R), and a data processing apparatus linked thereto, which is arranged to carry out the following steps:
- a) Calculation of a function (f), which describes a change (x) in the body structure (1) dependent upon the respiratory phase (R), which calculation takes place based on from the angiograms (3, 3a) in the database (2);
- b) Generation of the angiographic image (A) to be produced from at least one angiogram (3a) of the database (2), whose heartbeat phase (H₁) matches the given heartbeat phase (H_d) with the aid of the calculated function (f), wherein a representation of a current image of the body structure (1) is superimposed on the provided angiographic image (A).
- 2. (Currently Amended) A device as claimed in claim 1, characterized in that the database (2) contains approximately between 10 and 100, and preferably between 30 and 50 angiograms (3).
- 3. (Original) A device as claimed in claim 1, characterized in that the function (f) describes a change in the position of the body structure (1).
- 4. (Original) A device as claimed in claim 1, characterized in that the data processing apparatus is arranged to determine a change in the position of the body structure (1) by a cross-correlation and/or maximization of the mutual information in relation to a reference angiogram.

Appl. No. 10/575,572 Amdt. Dated July 20, 2007 Penly to Office Action of April 20

Reply to Office Action of April 20, 2007

- 5. (Original) A device as claimed in claim 1, characterized in that the data processing apparatus is arranged to leave static image objects discarded in the calculation of the function (f).
- 6. (Original) A device as claimed in claim 1, characterized in that it includes a display device for superimposed representation of a current image of the body structure (1) and the provided angiographic image (A).
- 7. (Original) A device as claimed in claim 1, characterized in that it includes an image-forming apparatus, in particular an X-ray apparatus and/or an MRI device.
- 8. (Original) A device as claimed in claim 1, characterized in that it includes an electrocardiographic device for determining an electrocardiogram.
- 9. (Original) A device as claimed in claim 1, characterized in that it includes a respiratory phase sensor.
- 10. (Currently Amended) A method for providing an angiographic image (A) of a body structure (1) matching a given heartbeat phase (H_d) and a respiratory phase (R_d), based on a database (2) with angiograms (3, 3a) of the body structure (1) from different heartbeat phases (H) and respiratory phases (R), including the following steps:
- a) Calculation of a function (f) which describes a change in the body structure (1) dependent upon the respiratory phase (R), which calculation takes place based on the angiograms (3, 3a) in the database (2);
- b) Generation of the angiographic image (A) to be provided from at least one angiogram (3a) of the database (2), whose heartbeat phase (H₁) matches the given heartbeat phase (H_d), with the aid of the calculated function (f), wherein a representation of a current image of the body structure (1) is superimposed on the provided angiographic image (A).

.

Appl. No. 10/575,572 Amdt. Dated July 20, 2007 Reply to Office Action of April 20, 2007

11. (New) A device as claimed in claim 1, characterized in that the database (2) contains approximately between 30 and 50 angiograms (3).